

SEQUENCE LISTING

<110> Bornstein, Paul
Kyriakides, Themis
Ratner, Buddy
Giachelli, Cecilia
Martinson, Laura
Scatena, Marta

<120> Methods and Devices to Modulate the Wound Response

<130> UOFW117618

<150> US 60/222,071

<151> 2000-08-01

<160> 4

<170> PatentIn version 3.0

<210> 1

<211> 1469

<212> DNA

<213> Homo Sapien

<220> \

<221> CDS

<222> (102)..(1001)

<400> 1

agcagcagga ggaggcagag cacagcatcg tcgggaccag actcgtctca ggccagttgc 60

agccttctca gccaaacgcc gaccaaggaa aactcactac c atg aga att gca gtg 116
Met Arg Ile Ala Val
1 5

att tgc ttt tgc ctc cta ggc atc acc tgt gcc ata cca gtt aaa cag 164
Ile Cys Phe Cys Leu Leu Gly Ile Thr Cys Ala Ile Pro Val Lys Gln
10 15 20

gct gat tct gga agt tct gag gaa aag cag ctt tac aac aaa tac cca 212
Ala Asp Ser Gly Ser Ser Glu Glu Lys Gln Leu Tyr Asn Lys Tyr Pro
25 30 35

gat gct gtg gcc aca tgg cta aac cct gac cca tct cag aag cag aat 260
Asp Ala Val Ala Thr Trp Leu Asn Pro Asp Pro Ser Gln Lys Gln Asn
40 45 50

ctc Leu	cta Leu	gcc Ala	cca Pro	cag Gln	acc Thr	ctt Leu	cca Pro	agt Ser	aag Lys	tcc Ser	aac Asn	gaa Glu	agc Ser	cat His	gac Asp	308
55						60					65					
cac His	atg Met	gat Asp	gat Asp	atg Met	gat Asp	gat Asp	gaa Glu	gat Asp	gat Asp	gat Asp	gac Asp	cat His	gtg Val	gac Asp	agc Ser	356
70					75					80					85	
cag Gln	gac Asp	tcc Ser	att Ile	gac Asp	tcg Ser	aac Asn	gac Asp	tct Ser	gat Asp	gat Asp	gta Val	gat Asp	gac Asp	act Thr	gat Asp	404
				90					95					100		
gat Asp	tct Ser	cac His	cag Gln	tct Ser	gat Asp	gag Glu	tct Ser	cac His	cat His	tct Ser	gat Asp	gaa Glu	tct Ser	gat Asp	gaa Glu	452
			105					110					115			
ctg Leu	gtc Val	act Thr	gat Asp	ttt Phe	ccc Pro	acg Thr	gac Asp	ctg Leu	cca Pro	gca Ala	acc Thr	gaa Glu	gtt Val	ttc Phe	act Thr	500
		120					125					130				
cca Pro	gtt Val	gtc Val	ccc Pro	aca Thr	gta Val	gac Asp	aca Thr	tat Tyr	gat Asp	ggc Gly	cga Arg	ggt Gly	gat Asp	agt Ser	gtg Val	548
	135					140					145					
gtt Val	tat Tyr	gga Gly	ctg Leu	agg Arg	tca Ser	aaa Lys	tct Ser	aag Lys	aag Lys	ttt Phe	cgc Arg	aga Arg	cct Pro	gac Asp	atc Ile	596
150					155					160					165	
cag Gln	tac Tyr	cct Pro	gat Asp	gct Ala	aca Thr	gac Asp	gag Glu	gac Asp	atc Ile	acc Thr	tca Ser	cac His	atg Met	gaa Glu	agc Ser	644
				170					175					180		
gag Glu	gag Glu	ttg Leu	aat Asn	ggt Gly	gca Ala	tac Tyr	aag Lys	gcc Ala	atc Ile	ccc Pro	gtt Val	gcc Ala	cag Gln	gac Asp	ctg Leu	692
			185					190					195			
aac Asn	gcg Ala	cct Pro	tct Ser	gat Asp	tgg Trp	gac Asp	agc Ser	cgt Arg	ggg Gly	aag Lys	gac Asp	agt Ser	tat Tyr	gaa Glu	acg Thr	740
		200					205					210				
agt Ser	cag Gln	ctg Leu	gat Asp	gac Asp	cag Gln	agt Ser	gct Ala	gaa Glu	acc Thr	cac His	agc Ser	cac His	aag Lys	cag Gln	tcc Ser	788
	215					220					225					
aga Arg	tta Leu	tat Tyr	aag Lys	cgg Arg	aaa Lys	gcc Ala	aat Asn	gat Asp	gag Glu	agc Ser	aat Asn	gag Glu	cat His	tcc Ser	gat Asp	836
230					235					240					245	

gtg att gat agt cag gaa ctt tcc aaa gtc agc cgt gaa ttc cac agc 884
Val Ile Asp Ser Gln Glu Leu Ser Lys Val Ser Arg Glu Phe His Ser
250 255 260

cat gaa ttt cac agc cat gaa gat atg ctg gtt gta gac ccc aaa agt 932
His Glu Phe His Ser His Glu Asp Met Leu Val Val Asp Pro Lys Ser
265 270 275

aag gaa gaa gat aaa cac ctg aaa ttt cgt att tct cat gaa tta gat 980
Lys Glu Glu Asp Lys His Leu Lys Phe Arg Ile Ser His Glu Leu Asp
280 285 290

agt gca tct tct gag gtc aat taaaaggaga aaaaatacaa tttctcactt 1031
Ser Ala Ser Ser Glu Val Asn
295 300

tgcatttagt caaaagaaaa aatgctttat agcaaaatga aagagaacat gaaatgcttc 1091

tttctcagtt tattgggttga atgtgtatct atttgagtct ggaaataact aatgtgtttg 1151

ataattagtt tagtttgtgg cttcatggaa actccctgta aactaaaagc ttcagggtta 1211

tgtctatggt cattctatag aagaaatgca aactatcact gtattttaat atttgttatt 1271

ctctcatgaa tagaaattta tgtagaagca aacaaaatac ttttaccac ttaaaaagag 1331

aatataacat tttatgtcac tataatcttt tgttttttaa gttagtgtat attttgttgt 1391

gattatcttt ttgtggtgtg aataaatctt ttatcttgaa tgtaataaga aaaaaaaaaa 1451

aaaaacaaaa aaaaaaaaaa 1469

<210> 2

<211> 300

<212> PRT

<213> Homo Sapien

<400> 2

Met Arg Ile Ala Val Ile Cys Phe Cys Leu Leu Gly Ile Thr Cys Ala
1 5 10 15

Ile Pro Val Lys Gln Ala Asp Ser Gly Ser Ser Glu Glu Lys Gln Leu
20 25 30

Tyr Asn Lys Tyr Pro Asp Ala Val Ala Thr Trp Leu Asn Pro Asp Pro
35 40 45

Ser Gln Lys Gln Asn Leu Leu Ala Pro Gln Thr Leu Pro Ser Lys Ser
50 55 60

Asn Glu Ser His Asp His Met Asp Asp Met Asp Asp Glu Asp Asp Asp
65 70 75 80

Asp His Val Asp Ser Gln Asp Ser Ile Asp Ser Asn Asp Ser Asp Asp
85 90 95

Val Asp Asp Thr Asp Asp Ser His Gln Ser Asp Glu Ser His His Ser
100 105 110

Asp Glu Ser Asp Glu Leu Val Thr Asp Phe Pro Thr Asp Leu Pro Ala
115 120 125

Thr Glu Val Phe Thr Pro Val Val Pro Thr Val Asp Thr Tyr Asp Gly
130 135 140

Arg Gly Asp Ser Val Val Tyr Gly Leu Arg Ser Lys Ser Lys Lys Phe
145 150 155 160

Arg Arg Pro Asp Ile Gln Tyr Pro Asp Ala Thr Asp Glu Asp Ile Thr
165 170 175

Ser His Met Glu Ser Glu Glu Leu Asn Gly Ala Tyr Lys Ala Ile Pro
180 185 190

Val Ala Gln Asp Leu Asn Ala Pro Ser Asp Trp Asp Ser Arg Gly Lys
195 200 205

Asp Ser Tyr Glu Thr Ser Gln Leu Asp Asp Gln Ser Ala Glu Thr His
210 215 220

Ser His Lys Gln Ser Arg Leu Tyr Lys Arg Lys Ala Asn Asp Glu Ser
225 230 235 240

Asn Glu His Ser Asp Val Ile Asp Ser Gln Glu Leu Ser Lys Val Ser
245 250 255

Arg Glu Phe His Ser His Glu Phe His Ser His Glu Asp Met Leu Val
260 265 270

Val Asp Pro Lys Ser Lys Glu Glu Asp Lys His Leu Lys Phe Arg Ile
275 280 285

Ser His Glu Leu Asp Ser Ala Ser Ser Glu Val Asn
290 295 300

<210> 3

<211> 5784

<212> DNA

<213> Homo Sapien

<220>

<221> CDS

<222> (240)..(3755)

<400> 3

acggcatcca gtacagaggg gctggacttg gacccttgca gcagccctgc acaggagaag 60

cggcataata agccgcgctg cccgggagcc gctcggccac gtccaccgga gcatcctgca 120

ctgcagggcc ggtctctcgc tccagcagag cctgcgcctt tctgactcgg tccggaacac 180

tgaaccaggt catcactgca tctttttggc aaaccaggag ctcagctgca ggaggcagg 239

atg gtc tgg agg ctg gtc ctg ctg gct ctg tgg gtg tgg ccc agc acg 287

Met Val Trp Arg Leu Val Leu Leu Ala Leu Trp Val Trp Pro Ser Thr
1 5 10 15

caa gct ggt cac cag gac aaa gac acg acc ttc gac ctt ttc agt atc 335

Gln Ala Gly His Gln Asp Lys Asp Thr Thr Phe Asp Leu Phe Ser Ile
20 25 30

agc aac atc aac cgc aag acc att ggc gcc aag cag ttc cgc ggg ccc 383

Ser Asn Ile Asn Arg Lys Thr Ile Gly Ala Lys Gln Phe Arg Gly Pro

35						40						45						
gac Asp	ccc Pro 50	ggc Gly	gtg Val	ccg Pro	gct Ala	tac Tyr 55	cgc Arg	ttc Phe	gtg Val	cgc Arg	ttt Phe 60	gac Asp	tac Tyr	atc Ile	cca Pro	431		
ccg Pro 65	gtg Val	aac Asn	gca Ala	gat Asp	gac Asp 70	ctc Leu	agc Ser	aag Lys	atc Ile	acc Thr 75	aag Lys	atc Ile	atg Met	cgg Arg	cag Gln 80	479		
aag Lys	gag Glu	ggc Gly	ttc Phe	ttc Phe 85	ctc Leu	acg Thr	gcc Ala	cag Gln	ctc Leu 90	aag Lys	cag Gln	gac Asp	ggc Gly	aag Lys 95	tcc Ser	527		
agg Arg	ggc Gly	acg Thr	ctg Leu 100	ttg Leu	gct Ala	ctg Leu	gag Glu	ggc Gly 105	ccc Pro	ggt Gly	ctc Leu	tcc Ser 110	cag Gln	agg Arg	cag Gln	575		
ttc Phe	gag Glu	atc Ile 115	gtc Val	tcc Ser	aac Asn	ggc Gly	ccc Pro 120	gcg Ala	gac Asp	acg Thr	ctg Leu	gat Asp 125	ctc Leu	acc Thr	tac Tyr	623		
tgg Trp 130	att Ile	gac Asp	ggc Gly	acc Thr	cgg Arg	cat His 135	gtg Val	gtc Val	tcc Ser	ctg Leu	gag Glu 140	gac Asp	gtc Val	ggc Gly	ctg Leu	671		
gct Ala 145	gac Asp	tcg Ser	cag Gln	tgg Trp	aag Lys 150	aac Asn	gtc Val	acc Thr	gtg Val	cag Gln 155	gtg Val	gct Ala	ggc Gly	gag Glu	acc Thr 160	719		
tac Tyr	agc Ser	ttg Leu	cac His	gtg Val 165	ggc Gly	tgc Cys	gac Asp	ctc Leu	ata Ile 170	gga Gly	cca Pro	gtt Val	gct Ala	ctg Leu 175	gac Asp	767		
gag Glu	ccc Pro	ttc Phe	tac Tyr 180	gag Glu	cac His	ctg Leu	cag Gln	gcg Ala 185	gaa Glu	aag Lys	agc Ser	cgg Arg	atg Met 190	tac Tyr	gtg Val	815		
gcc Ala	aaa Lys	ggc Gly 195	tct Ser	gcc Ala	aga Arg	gag Glu	agt Ser 200	cac His	ttc Phe	agg Arg	ggt Gly	ttg Leu 205	ctt Leu	cag Gln	aac Asn	863		
gtc Val	cac His 210	cta Leu	gtg Val	ttt Phe	gaa Glu	aac Asn 215	tct Ser	gtg Val	gaa Glu	gat Asp	att Ile 220	cta Leu	agc Ser	aag Lys	aag Lys	911		
ggt Gly	tgc Cys	cag Gln	caa Gln	ggc Gly	cag Gln	gga Gly	gct Ala	gag Glu	atc Ile	aac Asn	gcc Ala	atc Ile	agt Ser	gag Glu	aac Asn	959		

225				230				235				240				
aca Thr	gag Glu	acg Thr	ctg Leu	cgc Arg 245	ctg Leu	ggt Gly	ccg Pro	cat His	gtc Val 250	acc Thr	acc Thr	gag Glu	tac Tyr	gtg Val 255	ggc Gly	1007
ccc Pro	agc Ser	tcg Ser	gag Glu 260	agg Arg	agg Arg	ccc Pro	gag Glu	gtg Val 265	tgc Cys	gaa Glu	cgc Arg	tcg Ser	tgc Cys 270	gag Glu	gag Glu	1055
ctg Leu	gga Gly	aac Asn 275	atg Met	gtc Val	cag Gln	gag Glu	ctc Leu 280	tcg Ser	ggg Gly	ctc Leu	cac His	gtc Val 285	ctc Leu	gtg Val	aac Asn	1103
cag Gln 290	ctc Leu	agc Ser	gag Glu	aac Asn	ctc Leu	aag Lys 295	aga Arg	gtg Val	tcg Ser	aat Asn 300	gat Asp	aac Asn	cag Gln	ttt Phe	ctc Leu	1151
tgg Trp 305	gag Glu	ctc Leu	att Ile	ggt Gly	ggc Gly 310	cct Pro	cct Pro	aag Lys	aca Thr	agg Arg 315	aac Asn	atg Met	tca Ser	gct Ala	tgc Cys 320	1199
tgg Trp	cag Gln	gat Asp	ggc Gly	cgg Arg 325	ttc Phe	ttt Phe	gcg Ala	gaa Glu	aat Asn 330	gaa Glu	acg Thr	tgg Trp	gtg Val	gtg Val 335	gac Asp	1247
agc Ser	tgc Cys	acc Thr	acg Thr 340	tgt Cys	acc Thr	tgc Cys	aag Lys	aaa Lys 345	ttt Phe	aaa Lys	acc Thr	att Ile	tgc Cys 350	cac His	caa Gln	1295
atc Ile	acc Thr	tgc Cys 355	ccg Pro	cct Pro	gca Ala	acc Thr	tgc Cys 360	gcc Ala	agt Ser	cca Pro	tcc Ser	ttt Phe 365	gtg Val	gaa Glu	ggc Gly	1343
gaa Glu 370	tgc Cys	tgc Cys	cct Pro	tcc Ser	tgc Cys	ctc Leu 375	cac His	tcg Ser	gtg Val	gac Asp	ggg Gly 380	gag Glu	gag Glu	ggc Gly	tgg Trp	1391
tct Ser 385	ccg Pro	tgg Trp	gca Ala	gag Glu	tgg Trp 390	acc Thr	cag Gln	tgc Cys	tcc Ser	gtg Val 395	acg Thr	tgt Cys	ggc Gly	tct Ser	ggg Gly 400	1439
acc Thr	cag Gln	cag Gln	aga Arg	ggc Gly 405	cgg Arg	tcc Ser	tgt Cys	gac Asp	gtc Val 410	acc Thr	agc Ser	aac Asn	acc Thr	tgc Cys 415	ttg Leu	1487
ggg Gly	ccc Pro	tcg Ser	atc Ile	cag Gln	aca Thr	cgg Arg	gct Ala	tgc Cys	agt Ser	ctg Leu	agc Ser	aag Lys	tgt Cys	gac Asp	acc Thr	1535

				420				425				430							
cgc	atc	cgg	cag	gac	ggc	ggc	tgg	agc	cac	tgg	tca	cct	tgg	tct	tca	1583			
Arg	Ile	Arg	Gln	Asp	Gly	Gly	Trp	Ser	His	Trp	Ser	Pro	Trp	Ser	Ser				
		435				440						445							
tgc	tct	gtg	acc	tgt	gga	gtt	ggc	aat	atc	aca	cgc	atc	cgt	ctc	tgc	1631			
Cys	Ser	Val	Thr	Cys	Gly	Val	Gly	Asn	Ile	Thr	Arg	Ile	Arg	Leu	Cys				
		450				455						460							
aac	tcc	cca	gtg	ccc	cag	atg	ggg	ggc	aag	aat	tgc	aaa	ggg	agt	ggc	1679			
Asn	Ser	Pro	Val	Pro	Gln	Met	Gly	Gly	Lys	Asn	Cys	Lys	Gly	Ser	Gly				
				470						475				480					
cgg	gag	acc	aaa	gcc	tgc	cag	ggc	gcc	cca	tgc	cca	atc	gat	ggc	cgc	1727			
Arg	Glu	Thr	Lys	Ala	Cys	Gln	Gly	Ala	Pro	Cys	Pro	Ile	Asp	Gly	Arg				
				485				490						495					
tgg	agc	ccc	tgg	tcc	ccg	tgg	tcg	gcc	tgc	act	gtc	acc	tgt	gcc	ggc	1775			
Trp	Ser	Pro	Trp	Ser	Pro	Trp	Ser	Ala	Cys	Thr	Val	Thr	Cys	Ala	Gly				
		500						505				510							
ggg	atc	cgg	gag	cgc	acc	cgg	gtc	tgc	aac	agc	cct	gag	cct	cag	tac	1823			
Gly	Ile	Arg	Glu	Arg	Thr	Arg	Val	Cys	Asn	Ser	Pro	Glu	Pro	Gln	Tyr				
		515				520						525							
gga	ggg	aag	gcc	tgc	gtg	ggg	gat	gtg	cag	gag	cgt	cag	atg	tgc	aac	1871			
Gly	Gly	Lys	Ala	Cys	Val	Gly	Asp	Val	Gln	Glu	Arg	Gln	Met	Cys	Asn				
		530				535				540									
aag	agg	agc	tgc	ccc	gtg	gat	ggc	tgt	tta	tcc	aac	ccc	tgc	ttc	ccg	1919			
Lys	Arg	Ser	Cys	Pro	Val	Asp	Gly	Cys	Leu	Ser	Asn	Pro	Cys	Phe	Pro				
		545		550						555				560					
gga	gcc	cag	tgc	agc	agc	ttc	ccc	gat	ggg	tcc	tgg	tca	tgc	ggc	ttc	1967			
Gly	Ala	Gln	Cys	Ser	Ser	Phe	Pro	Asp	Gly	Ser	Trp	Ser	Cys	Gly	Phe				
				565				570						575					
tgc	cct	gtg	ggc	ttc	ttg	ggc	aat	ggc	acc	cac	tgt	gag	gac	ctg	gac	2015			
Cys	Pro	Val	Gly	Phe	Leu	Gly	Asn	Gly	Thr	His	Cys	Glu	Asp	Leu	Asp				
		580				585						590							
gag	tgt	gcc	ctg	gtc	ccc	gac	atc	tgc	ttc	tcc	acc	agc	aag	gtg	cct	2063			
Glu	Cys	Ala	Leu	Val	Pro	Asp	Ile	Cys	Phe	Ser	Thr	Ser	Lys	Val	Pro				
		595				600						605							
cgc	tgt	gtc	aac	act	cag	cct	ggc	ttc	cac	tgc	ctg	ccc	tgc	ccg	ccc	2111			
Arg	Cys	Val	Asn	Thr	Gln	Pro	Gly	Phe	His	Cys	Leu	Pro	Cys	Pro	Pro				

610					615					620						
cga Arg 625	tac Tyr	aga Arg	ggg Gly	aac Asn	cag Gln 630	ccc Pro	gtc Val	ggg Gly	gtc Val	ggc Gly 635	ctg Leu	gaa Glu	gca Ala	gcc Ala	aag Lys 640	2159
acg Thr	gaa Glu	aag Lys	caa Gln 645	gtg Val 645	tgt Cys	gag Glu	ccc Pro	gaa Glu	aac Asn 650	cca Pro	tgc Cys	aag Lys	gac Asp	aag Lys 655	aca Thr	2207
cac His	aac Asn	tgc Cys	cac His 660	aag Lys	cac His	gcg Ala	gag Glu	tgc Cys 665	atc Ile	tac Tyr	ctg Leu	ggt Gly	cac His 670	ttc Phe	agc Ser	2255
gac Asp	ccc Pro	atg Met 675	tac Tyr	aag Lys	tgc Cys	gag Glu	tgc Cys 680	cag Gln	aca Thr	ggc Gly	tac Tyr	gcg Ala 685	ggc Gly	gac Asp	ggg Gly	2303
ctc Leu	atc Ile 690	tgc Cys	ggg Gly	gag Glu	gac Asp	tcg Ser 695	gac Asp	ctg Leu	gac Asp	ggc Gly	tgg Trp 700	ccc Pro	aac Asn	ctc Leu	aat Asn	2351
ctg Leu 705	gtc Val	tgc Cys	gcc Ala	acc Thr	aac Asn 710	gcc Ala	acc Thr	tac Tyr	cac His	tgc Cys 715	atc Ile	aag Lys	gat Asp	aac Asn	tgc Cys 720	2399
ccc Pro	cat His	ctg Leu	cca Pro	aat Asn 725	tct Ser	ggg Gly	cag Gln	gaa Glu	gac Asp 730	ttt Phe	gac Asp	aag Lys	gac Asp	ggg Gly 735	att Ile	2447
ggc Gly	gat Asp	gcc Ala	tgt Cys 740	gat Asp	gat Asp	gac Asp	gat Asp	gac Asp 745	aat Asn	gac Asp	ggt Gly	gtg Val 750	acc Thr	gat Asp	gag Glu	2495
aag Lys	gac Asp	aac Asn 755	tgc Cys	cag Gln	ctc Leu	ctc Leu	ttc Phe 760	aat Asn	ccc Pro	cgc Arg	cag Gln 765	gct Ala	gac Asp	tat Tyr	gac Asp	2543
aag Lys 770	gat Asp	gag Glu	gtt Val	ggg Gly	gac Asp	cgc Arg 775	tgt Cys	gac Asp	aac Asn	tgc Cys	cct Pro 780	tac Tyr	gtg Val	cac His	aac Asn	2591
cct Pro 785	gcc Ala	cag Gln	atc Ile	gac Asp	aca Thr 790	gac Asp	aac Asn	aat Asn	gga Gly	gag Glu 795	ggt Gly	gac Asp	gcc Ala	tgc Cys	tcc Ser 800	2639
gtg Val	gac Asp	att Ile	gat Asp	ggg Gly	gac Asp	gat Asp	gtc Val	ttc Phe	aat Asn	gaa Glu	cga Arg	gac Asp	aat Asn	tgt Cys	ccc Pro	2687

805								810				815				
tac	gtc	tac	aac	act	gac	cag	agg	gac	acg	gat	ggt	gac	ggt	gtg	ggg	2735
Tyr	Val	Tyr	Asn	Thr	Asp	Gln	Arg	Asp	Thr	Asp	Gly	Asp	Gly	Val	Gly	
			820				825						830			
gat	cac	tgt	gac	aac	tgc	ccc	ctg	gtg	cac	aac	cct	gac	cag	acc	gac	2783
Asp	His	Cys	Asp	Asn	Cys	Pro	Leu	Val	His	Asn	Pro	Asp	Gln	Thr	Asp	
			835				840						845			
gtg	gac	aat	gac	ctt	gtt	ggg	gac	cag	tgt	gac	aac	aac	gag	gac	ata	2831
Val	Asp	Asn	Asp	Leu	Val	Gly	Asp	Gln	Cys	Asp	Asn	Asn	Glu	Asp	Ile	
			850				855						860			
gat	gac	gac	ggc	cac	cag	aac	aac	cag	gac	aac	tgc	ccc	tac	atc	tcc	2879
Asp	Asp	Asp	Gly	His	Gln	Asn	Asn	Gln	Asp	Asn	Cys	Pro	Tyr	Ile	Ser	
			865				870						880			
aac	gcc	aac	cag	gct	gac	cat	gac	aga	gac	ggc	cag	ggc	gac	gcc	tgt	2927
Asn	Ala	Asn	Gln	Ala	Asp	His	Asp	Arg	Asp	Gly	Gln	Gly	Asp	Ala	Cys	
			885				890						895			
gac	cct	gat	gat	gac	aac	gat	ggc	gtc	ccc	gat	gac	agg	gac	aac	tgc	2975
Asp	Pro	Asp	Asp	Asp	Asn	Asp	Gly	Val	Pro	Asp	Asp	Arg	Asp	Asn	Cys	
			900				905						910			
cgg	ctt	gtg	ttc	aac	cca	gac	cag	gag	gac	ttg	gac	ggt	gat	gga	cgg	3023
Arg	Leu	Val	Phe	Asn	Pro	Asp	Gln	Glu	Asp	Leu	Asp	Gly	Asp	Gly	Arg	
			915				920						925			
ggt	gat	att	tgt	aaa	gat	gat	ttt	gac	aat	gac	aac	atc	cca	gat	att	3071
Gly	Asp	Ile	Cys	Lys	Asp	Asp	Phe	Asp	Asn	Asp	Asn	Ile	Pro	Asp	Ile	
			930				935						940			
gat	gat	gtg	tgt	cct	gaa	aac	aat	gcc	atc	agt	gag	aca	gac	ttc	agg	3119
Asp	Asp	Val	Cys	Pro	Glu	Asn	Asn	Ala	Ile	Ser	Glu	Thr	Asp	Phe	Arg	
			945				950						960			
aac	ttc	cag	atg	gtc	ccc	ttg	gat	ccc	aaa	ggg	acc	acc	caa	att	gat	3167
Asn	Phe	Gln	Met	Val	Pro	Leu	Asp	Pro	Lys	Gly	Thr	Thr	Gln	Ile	Asp	
			965				970						975			
ccc	aac	tgg	gtc	att	cgc	cat	caa	ggc	aag	gag	ctg	gtt	cag	aca	gcc	3215
Pro	Asn	Trp	Val	Ile	Arg	His	Gln	Gly	Lys	Glu	Leu	Val	Gln	Thr	Ala	
			980				985						990			
aac	tcg	gac	ccc	ggc	atc	gct	gta	ggt	ttt	gac	gag	ttt	ggg	tct	gtg	3263
Asn	Ser	Asp	Pro	Gly	Ile	Ala	Val	Gly	Phe	Asp	Glu	Phe	Gly	Ser	Val	

995	1000	1005	
gac ttc agt ggc aca ttc tac Asp Phe Ser Gly Thr Phe Tyr 1010	gta aac act gac cgg Val Asn Thr Asp Arg 1015	gac gac gac Asp Asp Asp 1020	3308
tat gct ggc ttc gtc ttt ggt Tyr Ala Gly Phe Val Phe Gly 1025	tac cag tca agc agc Tyr Gln Ser Ser 1030	cgc ttc tat Arg Phe Tyr 1035	3353
gtg gtg atg tgg aag cag gtg Val Val Met Trp Lys Gln Val 1040	acg cag acc tac tgg Thr Gln Thr Tyr Trp 1045	gag gac cag Glu Asp Gln 1050	3398
ccc acg cgg gcc tat ggc tac Pro Thr Arg Ala Tyr Gly Tyr 1055	tcc ggc gtg tcc ctc Ser Gly Val Ser Leu 1060	aag gtg gtg Lys Val Val 1065	3443
aac tcc acc acg ggg acg ggc Asn Ser Thr Thr Gly Thr Gly 1070	gag cac ctg agg aac Glu His Leu Arg Asn 1075	gcg ctg tgg Ala Leu Trp 1080	3488
cac acg ggg aac acg ccg ggg His Thr Gly Asn Thr Pro Gly 1085	cag gtg cga acc tta Gln Val Arg Thr Leu 1090	tgg cac gac Trp His Asp 1095	3533
ccc agg aac att ggc tgg aag Pro Arg Asn Ile Gly Trp Lys 1100	gac tac acg gcc tat Asp Tyr Thr Ala Tyr 1105	agg tgg cac Arg Trp His 1110	3578
ctg act cac agg ccc aag acc Leu Thr His Arg Pro Lys Thr 1115	ggc tac atc aga gtc Gly Tyr Ile Arg Val 1120	tta gtg cat Leu Val His 1125	3623
gaa gga aaa cag gtc atg gca Glu Gly Lys Gln Val Met Ala 1130	gac tca gga cct atc Asp Ser Gly Pro Ile 1135	tat gac caa Tyr Asp Gln 1140	3668
acc tac gct ggc ggg cgg ctg Thr Tyr Ala Gly Gly Arg Leu 1145	ggt cta ttt gtc ttc Gly Leu Phe Val Phe 1150	tct caa gaa Ser Gln Glu 1155	3713
atg gtc tat ttc tca gac ctc Met Val Tyr Phe Ser Asp Leu 1160	aag tac gaa tgc aga Lys Tyr Glu Cys Arg 1165	gat att Asp Ile 1170	3755
taaacaagat ttgctgcatt tccggcaatg ccctgtgcat gccatggtcc ctagacacct			3815

cagttcattg	tggtccttgc	ggcttctctc	tctagcagca	cctcctgtcc	cttgacctta	3875
actctgatgg	ttcttcacct	cctgccagca	accccaaacc	caagtgcctt	cagaggataa	3935
atatcaatgg	aactcagaga	tgaacatcta	accactaga	ggaaaccagt	ttggtgatat	3995
atgagacttt	atgtggagtg	aaaattgggc	atgccattac	attgcttttt	cttgtttggt	4055
taaaaagaat	gacgtttaca	tataaaatgt	aattacttat	tgtatttatg	tgtatatgga	4115
gttgaagggg	atactgtgca	taagccatta	tgataaatta	agcatgaaaa	atattgctga	4175
actacttttg	gtgcttaaag	ttgtcactat	tcttgaatta	gagttgctct	acaatgacac	4235
acaaatcccg	ctaaataaat	tataaacaag	gggtcaattca	aatttgaagt	aatgttttag	4295
taaggagaga	ttagaagaca	acaggcatag	caaatgacat	aagctaccga	ttaactaatc	4355
ggaacatgta	aaacagttac	aaaaataaac	gaactctcct	cttgtcctac	aatgaaagcc	4415
ctcatgtgca	gtagagatgc	agtttcatca	aagaacaaac	atccttgcaa	atgggtgtga	4475
cgcggttcca	gatgtggatt	tggcaaaacc	tcatttaagt	aaaagggttag	cagagcaaag	4535
tgcggtgctt	tagctgctgc	ttgtgccgtt	gtggcgtcgg	ggaggctcct	gcctgagctt	4595
ccttccccag	ctttgctgcc	tgagaggaac	cagagcagac	gcacaggccg	gaaaaggcgc	4655
atctaacgcg	tatctaggct	ttggtaactg	cggacaagtt	gcttttacct	gatttgatga	4715
tacatttcat	taaggttcca	gttataaata	ttttgttaat	atttattaag	tgactataga	4775
atgcaactcc	atttaccagt	aacttatttt	aaatatgcct	agtaacacat	atgtagtata	4835
atttctagaa	acaaacatct	aataagtata	taatcctgtg	aaaatatgag	gcttgataat	4895
attaggttgt	cacgatgaag	catgctagaa	gctgtaacag	aatacataga	gaataatgag	4955
gagtttatga	tggaacctta	atatataatg	ttgccagcga	ttttagtcca	atatttggtta	5015
ctgttatcta	tctgctgtat	atggaattct	tttaattcaa	acgctgaaaa	cgaatcagca	5075
tttagtcttg	ccaggcacac	ccaataatca	gtcatgtgta	atatgcacaa	gtttgttttt	5135
gtttttgttt	tttttgttgg	ttgggttttt	tgctttaagt	tgcatgatct	ttctgcagga	5195
aatagtcact	catcccactc	cacataaggg	gtttagtaag	agaagtctgt	ctgtctgatg	5255

```

atggataggg ggcaaattctt tttccccttt ctgttaatag tcatcacatt tctatgccaa 5315
acaggaacga tccataactt tagtcttaat gtacacattg catttttgata aaattaattt 5375
tgttgtttcc tttgaggttg atcgttgtgt tgttttgctg cactttttac ttttttgctg 5435
gtggagctgt attcccgaga caacgaagcg ttgggatact tcattaaatg tagcgactgt 5495
caacagcgtg caggttttct gtttctgtgt tgtgggggtca accgtacaat ggtgtgggaa 5555
tgacgatgat gtgaatattt agaatgtacc atattttttg taaattattt atgttttttct 5615
aaacaaattt atcgtatagg ttgatgaaac gtcatgtgtt ttgccaaaga ctgtaaatat 5675
ttatttatgt gttcacatgg tcaaaatttc accactgaaa ccctgcactt agctagaacc 5735
tcatttttaa agattaacaa caggaaataa attgtaaaaa aggttttct 5784

```

```

<210> 4
<211> 1172
<212> PRT
<213> Homo Sapien

```

```

<400> 4

```

```

Met Val Trp Arg Leu Val Leu Leu Ala Leu Trp Val Trp Pro Ser Thr
1          5          10          15

```

```

Gln Ala Gly His Gln Asp Lys Asp Thr Thr Phe Asp Leu Phe Ser Ile
          20          25          30

```

```

Ser Asn Ile Asn Arg Lys Thr Ile Gly Ala Lys Gln Phe Arg Gly Pro
          35          40          45

```

```

Asp Pro Gly Val Pro Ala Tyr Arg Phe Val Arg Phe Asp Tyr Ile Pro
          50          55          60

```

```

Pro Val Asn Ala Asp Asp Leu Ser Lys Ile Thr Lys Ile Met Arg Gln
65          70          75          80

```

```

Lys Glu Gly Phe Phe Leu Thr Ala Gln Leu Lys Gln Asp Gly Lys Ser
          85          90          95

```


Asp Pro Met Tyr Lys Cys Glu Cys Gln Thr Gly Tyr Ala Gly Asp Gly
675 680 685

Leu Ile Cys Gly Glu Asp Ser Asp Leu Asp Gly Trp Pro Asn Leu Asn
690 695 700

Leu Val Cys Ala Thr Asn Ala Thr Tyr His Cys Ile Lys Asp Asn Cys
705 710 715 720

Pro His Leu Pro Asn Ser Gly Gln Glu Asp Phe Asp Lys Asp Gly Ile
725 730 735

Gly Asp Ala Cys Asp Asp Asp Asp Asp Asn Asp Gly Val Thr Asp Glu
740 745 750

Lys Asp Asn Cys Gln Leu Leu Phe Asn Pro Arg Gln Ala Asp Tyr Asp
755 760 765

Lys Asp Glu Val Gly Asp Arg Cys Asp Asn Cys Pro Tyr Val His Asn
770 775 780

Pro Ala Gln Ile Asp Thr Asp Asn Asn Gly Glu Gly Asp Ala Cys Ser
785 790 795 800

Val Asp Ile Asp Gly Asp Asp Val Phe Asn Glu Arg Asp Asn Cys Pro
805 810 815

Tyr Val Tyr Asn Thr Asp Gln Arg Asp Thr Asp Gly Asp Gly Val Gly
820 825 830

Asp His Cys Asp Asn Cys Pro Leu Val His Asn Pro Asp Gln Thr Asp
835 840 845

Val Asp Asn Asp Leu Val Gly Asp Gln Cys Asp Asn Asn Glu Asp Ile
850 855 860

FOF020-0226T660

Asp Asp Asp Gly His Gln Asn Asn Gln Asp Asn Cys Pro Tyr Ile Ser
865 870 875 880

Asn Ala Asn Gln Ala Asp His Asp Arg Asp Gly Gln Gly Asp Ala Cys
885 890 895

Asp Pro Asp Asp Asp Asn Asp Gly Val Pro Asp Asp Arg Asp Asn Cys
900 905 910

Arg Leu Val Phe Asn Pro Asp Gln Glu Asp Leu Asp Gly Asp Gly Arg
915 920 925

Gly Asp Ile Cys Lys Asp Asp Phe Asp Asn Asp Asn Ile Pro Asp Ile
930 935 940

Asp Asp Val Cys Pro Glu Asn Asn Ala Ile Ser Glu Thr Asp Phe Arg
945 950 955 960

Asn Phe Gln Met Val Pro Leu Asp Pro Lys Gly Thr Thr Gln Ile Asp
965 970 975

Pro Asn Trp Val Ile Arg His Gln Gly Lys Glu Leu Val Gln Thr Ala
980 985 990

Asn Ser Asp Pro Gly Ile Ala Val Gly Phe Asp Glu Phe Gly Ser Val
995 1000 1005

Asp Phe Ser Gly Thr Phe Tyr Val Asn Thr Asp Arg Asp Asp Asp
1010 1015 1020

Tyr Ala Gly Phe Val Phe Gly Tyr Gln Ser Ser Ser Arg Phe Tyr
1025 1030 1035

Val Val Met Trp Lys Gln Val Thr Gln Thr Tyr Trp Glu Asp Gln
1040 1045 1050

